



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,038	05/23/2000	Mark Sean Hefty	219.38022X00	4371

7590

08/02/2005

Christopher Gagne
c/o BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025

EXAMINER

NGUYEN, THANH T

ART UNIT

PAPER NUMBER

2144

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/576,038

Applicant(s)

HEFTY ET AL.

Examiner

Tammy T. Nguyen

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

Detailed Office Action

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 25, 2005 has been entered.
2. Claims 1-31 are cancelled.
3. Claims 32-55 are newly added.
4. Claims 32-55 are presented for examination.

Claim Objections

5. Claims 38, and 54, applicants are required to take of “; and” and a enter “.”

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2143

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 32-55 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Massa et al., (USPN 6,658,469 – Date of Patent: December 2, 2003, herein referred to as “Massa”).
8. As to claim 32, Massa teaches the invention as claimed, including a method comprising:
if an amount of data located in a first memory buffer does not exceed a maximum transfer capacity of a system in which the data is to be transferred: associating the data with a first transfer operation (see col.12, lines 33-59); and if the amount of data associated with the first transfer operation has not reached the maximum transfer capacity, associating: data located in one or more portions of one or more other memory buffers with the first transfer operation (see col.13, lines 30-63).
9. As to claim 33, Massa teaches the invention as claimed, additionally comprising transferring the data associated with the first transfer operation (see col.13, lines 45-63).
10. As to claim 34, Massa teaches the invention as claimed, additionally comprising associating a descriptor with the first transfer operation (see col.14, lines 41-59).
11. As to claim 35, Massa teaches the invention as claimed, additionally comprising associating data with one or more subsequent transfer operations (see col.13, lines 55-63).
12. As to claim 36, Massa teaches the invention as claimed, wherein the first and one or more subsequent transfer operations are performed in response to one or more RDMA (Remote Direct Memory Access) requests (see col.13, lines 30-40).

13. As to claim 37, Massa teaches the invention as claimed, additionally comprising: if the amount of data located in the first memory buffer exceeds the maximum transfer capacity: associating a portion of the data with the first transfer operation; and associating one or more subsequent portions of the data with one or more subsequent transfer operations (see col.13, line 64 to col.14, line 16).
14. As to claim 38, Massa teaches the invention as claimed, additionally comprising: associating a descriptor with the first transfer operation; and transferring the data associated with the first transfer operation (see col.11, lines 31-52).
15. As to claim 39, Massa teaches the invention as claimed, additionally comprising: associating a descriptor with each of the one or more subsequent transfer operations; and transferring the data associated with the one or more subsequent transfer operations (see col.12, lines 45-59, and col.13, lines 45-64).
16. As to claim 40, Massa teaches the invention as claimed, including an apparatus comprising: an RDMA (remote direct memory access) manager operable to service one or more RDMA requests (see col.12, lines 45-59, and col.13, lines 45-67), and to: determine if an amount of data located in a first memory buffer exceeds a maximum transfer capacity of a system in which the data is to be transferred, and: if it is determined that the amount of data located in a first memory buffer does not exceed the maximum transfer capacity, then associate the data with a first transfer operation (see col.13, lines 30-63); and if the amount of data associated with the first transfer operation has not reached the maximum transfer capacity, associate data located in one or more portions of

Art Unit: 2143

one or more other memory buffers with the first transfer operation (see col.12, lines 33-59, and col.13, lines 30-65).

17. As to claim 41, Massa teaches the invention as claimed, the RDMA manager additionally operable to transfer the data associated with the first transfer operation (see col.13, lines 45-63).

18. As to claim 42, Massa teaches the invention as claimed, the RDMA manager additionally operable to associate data with one or more subsequent transfer operations (see col.13, lines 55-64).

19. As to claim 43, Massa teaches the invention as claimed, the RDMA manager additionally operable to: determine if the amount of data located in the first memory buffer exceeds the maximum transfer capacity, and: if the amount of data located in the first memory buffer exceeds the maximum transfer capacity: associate a portion of the data with the first transfer operation; and associate one or more subsequent, portions of the data with one or more subsequent transfer operations (see col.13, lines 30-67).

20. Claim 48 has similar limitations as claim 32; therefore, it is rejected under the same rationale.

21. Claim 53 has similar limitations as claim 43; therefore, it is rejected under the same rationale.

22. Claims 49-52 have similar limitations as claims 33-36; therefore, they are rejected under the same rationale.

23. Claims 54, and 55 have similar limitations as claims 38, and 39; therefore, they are rejected under the same rationale.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massa et al.; (hereinafter Massa) U.S. Patent No. 6,658,469 in view of Frank L. Berry., (hereinafter Berry) U.S. Patent No. 6,859,867.

26. As to claim 44, Massa teaches the invention as claimed, including a system comprising: a host fabric adapter; and an RDMA (remote direct memory access) manager included in a software stack of the host fabric adapter, the RDMA manager operable to service one or more RDMA requests (see col.12, lines 45-55), and to: determine if an amount of data located in a first memory buffer exceeds a maximum transfer capacity of a system in which the data is to be transferred (see col.11, lines 40-46), and; if it is determined that the amount of data located in the first memory buffer does not exceed the maximum transfer capacity, then associate the data with a first transfer operation (see col.12, lines 45-59, and col.13, lines 30-55); and if the amount of data associated with the first transfer operation has not reached the maximum transfer capacity, associate data located in one or

Art Unit: 2143

more portions of one or more other memory buffers of the plurality of memory buffers with the first transfer operation (see col.13, lines 55-67, and col.14, lines 28-67). But Massa does not explicitly teach fabric adapter. However, Berry teaches fabric adapter (fig.2)(see col.6, lines 35-40, and col.10, lines 10-25). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Berry into the computer system of Massa to have fabric adapter because it would have an efficient system that can provide specific functions that enable any-server-to-any-storage device connectivity through the use of Fibre Channel switching technology.

27. Claim 45 has similar limitations as claim 41; therefore, it is rejected under the same rationale.

28. Claim 46 has similar limitations as claim 42; therefore, it is rejected under the same rationale.

29. Claim 47 has similar limitations as claim 43; therefore, it is rejected under the same rationale.

Conclusion

30. Any inquiries concerning this communication or earlier communications from the examiner should be directed to **Tammy T. Nguyen** who may be reached via telephone at **(571) 272-3929**. The examiner can normally be reached Monday through Friday between 8:00 a.m. and 5:00 p.m. eastern standard time.

If you need to send the Examiner, a facsimile transmission regarding this

Art Unit: 2143

instant application, please send it to (703) 872-9306. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, David Wiley, may be reached at (571) 272-3923.

TTN

July 20, 2005

MARC D. THOMPSON
MARC THOMPSON
PRIMARY EXAMINER